

Title (en)

Heat treatment process for wire rods.

Title (de)

Verfahren zum Wärmebehandeln von Walzdraht.

Title (fr)

Procédé de traitement thermique de fil machine.

Publication

**EP 0582180 A1 19940209 (EN)**

Application

**EP 93111986 A 19930727**

Priority

JP 20112392 A 19920728

Abstract (en)

A conveyor moves forward an unconcentrically spiralled loose coil (1a) of steel wire rod (1) having a temperature not lower than Ar3 into a retention bath (4) of molten salt for heat treatment. Just before entering the retention bath, the coil is quenched by spraying a solution of molten salt (8a, 8b) kept at a temperature between 400 and 600 DEG C and not higher than the temperature of the retention bath either from above and below or from only above the coil. Then, the quenched coil is retained in the retention bath of molten salt kept at a temperature between 400 and 600 DEG C, thereby causing pearlite transformation and forming a fine pearlite structure in the wire rod. <IMAGE>

IPC 1-7

**C21D 9/573; C21D 9/64; C21D 9/58**

IPC 8 full level

**C21D 9/52** (2006.01); **C21D 1/46** (2006.01); **C21D 9/573** (2006.01); **C21D 9/58** (2006.01); **C21D 9/64** (2006.01); **C21D 1/607** (2006.01);  
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CPC (source: EP KR US)

**C21D 9/52** (2013.01 - KR); **C21D 9/5732** (2013.01 - EP US); **C21D 9/58** (2013.01 - EP US); **C21D 9/64** (2013.01 - EP US);  
**C21D 1/607** (2013.01 - EP US); **C21D 1/667** (2013.01 - EP US)

Citation (search report)

- [Y] GB 2062692 A 19810528 - NIPPON STEEL CORP
- [Y] DE 4035155 C1 19910912
- [A] DE 2435831 A1 19760212 - ARBED F & G DRAHTWERKE
- [A] US 3615926 A 19711026 - TAYLOR HAROLD L
- [A] US 3340109 A 19670905 - KEOUGH WILLIAM R
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DOCDB simple family (publication)

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